

## CHAPTER 6 - INTERMODAL ASSESSMENT

### 6.1 INTRODUCTION

Airports are, by their very function, true intermodal transportation facilities, a key component of which is ground access. Ground access (both in terms of physical facilities and available services) is an extremely important element of the aviation system, particularly in terms of an airport's ability to fulfill its role and to effectively serve its market area. Each one of the 25 airports in the State System Plan can be accessed by public-use roads, and private automobiles are by far the predominant mode of transportation to and from airports.

As noted in New Hampshire DOT's Long Range Statewide Transportation Plan:

“Historically, communities developed in densely built areas encompassing all essential services. This development pattern lent itself to connections between towns by bus and rail, and within communities through a variety of options, including streetcars, buses, and easy pedestrian access. Since World War II, housing and employment opportunities have moved outward from the cities to the countryside. The result is that New Hampshire now relies on automobiles and trucks, and has built the highway system to meet that need. In turn, modern residential development has not provided the density essential for successful public transportation.”

In addition, the Plan notes that in 1990 only 1% of all commuters used public transportation in New Hampshire, and that the percentage of car-poolers had steadily declined since 1980. As a result, the share of the State's population that drove to work alone had increased to 78% between 1980-1990, and according to the recent 2000 U.S. Census results, the percentage of commuters driving alone has increased even further over the last decade, to 82%. As a result, the predominant use of private automobiles to access airports is very consistent with overall travel patterns in the state.

The lack of ground transportation services does have an impact on aviation activity, particularly by transient aircraft; i.e., visiting pilots and passengers who fly into an airport. At airports where transient pilots and passengers do not have access to taxis, rental cars, or buses, it is very difficult to travel to local destinations, even though they can fly into the airport.

As noted in more detail below (particularly in Tables 6-1 and 6-2) of the 25 airports in the State System:

- Five airports (Colebrook, Errol, Dean Memorial, Franconia, and Newfound Valley) have virtually no service by taxis, rental cars, buses, limos, or courtesy cars.
- Only three general aviation airports (Laconia, Concord, and Dillant-Hopkins) have rental car and/or taxi companies located on the airport.
- An intercity bus carrier serves only one airport (Manchester).
- Three airports (Manchester, Pease International Tradeport, and Skyhaven) are served by local transit systems.
- None of the airports in the state have rail service.

Three key questions are addressed in this chapter, listed below, and a summary of the findings are presented under each question. A more detailed discussion about each issue is also presented.

1. Is the level of service provided by any airport in the State negatively impacted by the lack of ground transportation services?

Based on discussions with airport managers and FBOs, the majority of airports in the State are not negatively

impacted by the lack of public transportation. The large majority of general aviation pilots and passengers use private automobiles, taxis, and rental cars to access local destinations, and most GA airports have some form of rental car and/or taxi service available. However, there was a need expressed by a number of FBOs for improved service by taxi and rental car companies. Only three of the general aviation airports (Laconia, Concord, and Dillant-Hopkins) have rental car companies located on the airport, while 14 other GA airports rely on drop-offs and pick-ups by rental car and taxi companies located off-airport. Five GA airports have no service by taxi or rental car companies. A number of FBOs and airport managers also noted that local taxi companies, while available, often operate old cars and are not as reliable as their customers (who fly in) would like.

Scheduled airline passengers also use private automobiles, taxis and rental cars, as well as limousines, vans, and to a much lesser extent, buses. The three commercial service airports (Manchester, Lebanon, and Pease International Tradeport) have rental car companies located on-airport, and local taxi companies also serve all three. Surveys at Manchester Airport indicated that 71% of their passengers accessed the airport in a private automobile, 13% in a rental car, 3% in a limousine, 2.5% via taxi, and 2% in a courtesy van. Almost 8% of the passengers used 'other' travel means, while 0.1% (one tenth of one percent) used public transportation.

By comparison:

- a) Nationally, personal vehicles generated 98.1% of all urban travel in 2000, while public transportation captured only 1.9%.
- b) New Hampshire ranked 47<sup>th</sup> among the states in terms of passenger miles traveled on public transportation (5.1 million in 1997), and 26<sup>th</sup> in terms of subsidies per passenger mile (0.371 cents).

Manchester is the only airport of the three served by intercity buses (Vermont Transit), while Pease International Tradeport and Manchester are both served by a local transit operator (Portsmouth-Pease Trolley and MTA respectively).

Interviews conducted with a number of intercity bus companies (including the Coach Company, Concord Trailways, Vermont Transit, and C&J Trailways) consistently indicated that there is insufficient demand at any airport other than Manchester to justify providing bus service, even when existing routes proceed close to airports such as Lebanon and Pease International Tradeport. In 2001, Manchester Airport handled more than 3,000,000 passengers (inbound and outbound).

2. Is there sufficient demand and are there opportunities to increase public transportation to airports in the state?

Based on the surveys conducted of intercity bus companies, airport managers, and FBOs, as well as other data sources, with the exception of Manchester Airport, there is not sufficient demand at airports to support scheduled service by bus companies or other common carriers. When bus companies were asked what level of demand and/or subsidies would be required to initiate service to selected airports, they said that it was unlikely that government agencies could provide the level of subsidies needed, and the cost per-passenger would be very high. In fact, they noted that serving airports would increase trip times, and thereby hurt ridership on existing markets. Other intercity bus companies may serve Manchester Airport in the future, but there was no interest expressed in either subsidized or non-subsidized service to any other airport in the state.

3. What role does the airport sponsor, State of NH, and/or FAA play in improving ground transportation?

Rental car, taxi, and intercity bus companies are private for-profit entities, unlike local transit companies that are either municipally-owned and operated, or run by a non-profit organization. Private companies make their own decisions about routes, frequencies, and fares, and they have indicated that they will not provide

additional service to general aviation airports because there is insufficient demand to support increased service.

At those general aviation airports that have a lack of service by rental car and/or taxi companies (Colebrook, Errol, Dean Memorial, Franconia, and Newfound Valley), and also at those airports that have some, but inadequate taxi/rental car service (Claremont, Parlin, Whitefield, Hawthorne, and Gorham), either the State or municipality could base one or two courtesy cars at each airport for use by transient pilots and passengers. Large FBOs located at some commercial service airports provide courtesy cars for their customers, primarily for the pilots who wait at the airport for their passengers. At the GA airports in New Hampshire listed above, FBOs will not provide courtesy cars, and in fact a number of airports do not have FBOs. As a result, if the State or municipalities do not provide courtesy cars at those airports, it is very unlikely that any private companies will provide them.

The State and municipalities auction surplus equipment, including cars, and instead of auctioning all of the cars (such as used police cars, for example) some could be based at airports. At airports with FBOs, the FBO personnel can track who uses the cars, check driver's licenses, and oversee fuel and maintenance. At airports without FBOs, an on-line registration system could be established using the internet, but the actual use of the car by transient pilots and passengers would be on the 'honor system'. Personnel from the municipality or state would have to monitor the car for fuel and maintenance. Another issue is liability insurance, and it is not known whether the municipality or State could acquire adequate coverage.

## 6.2 INTERMODAL AND MULTIMODAL DEFINED

In order to promote multi-modal transportation, which decreases highway congestion and offers both economic and environmental benefits, intermodal facilities are needed. As noted above, airports are by their very function inter-modal transfer facilities. Like bus and train stations, airports are the points at which people and cargo transfer from one mode of transportation to another. A key factor in the design of commercial airports is the efficiency of the transfer process between airplanes and automobiles, buses, etc. In addition, separate inter-modal transfer facilities have been constructed on airports, such as the Portsmouth Transportation Center, which is a park-and-ride lot and bus station located on Pease International Tradeport, although it is not adjacent to the airline terminal.

The U.S. Department of Transportation defines six separate modes of transportation:

- Highway (private automobiles, taxis, intra-state buses, limousines, etc.)
- Air (commercial service [passenger and cargo] and general aviation)
- Rail (inter-state)
- Urban Transit (includes light, heavy, and commuter rail; motor bus; trolley bus; van pools; automated guideway; and demand-responsive vehicles)
- Water (transport of freight and/or people by commercial vessels under U.S. Coast Guard jurisdiction)
- Pipeline

Of those six, this analysis focused on three modes:

- Highway
- Rail
- Urban Transit

At 21 of the 25 airports (84%) in New Hampshire, available ground access is only via a single mode - highway (private/rental car, taxi, or limousine). By comparison, some large-hub airports such as Boston Logan International, enjoy true multi-modal access a) highway - private cars, taxis, intercity buses, shuttle vans, and limousines; b) urban transit - buses and light rail (MBTA); and c) water shuttle).

In New Hampshire, only three airports (12%) are served by local transit (bus) service (Manchester, Pease International Tradeport, and Skyhaven). A fourth, Laconia Airport, is actually the home base of the Greater Laconia Transit Agency (GLTA) although the airport is not listed on its route map. A number of other cities have both airports and local transit (bus) service (such as Concord, Nashua, Berlin, Lebanon, and Keene), however, the transit network does not serve the airport. Although in some cases, the transit route runs very close to the airport. In addition, only one airport, Manchester, is served by an interstate common carrier (Vermont Transit). There is trolley service between the terminal at Pease International Tradeport and the Portsmouth Transportation Center, which has intercity bus service. Figure 6-1 shows the existing intermodal transit lines within New Hampshire.

The U.S. Department of Transportation has actively promoted multi-modal transportation planning, which is consistent with the intent of Congress as codified in two key pieces of federal legislation: the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA - PL 102-240), and the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21 - PL 105-178). Congress has promoted increased use of public transportation because it offers a number of benefits, such as more efficient use of energy (see Table 6-1); decreased automobile traffic, which results in lower emissions and better air quality, less road congestion, and fewer highway fatalities; and, potentially, less demand for highway construction and capacity enhancements.

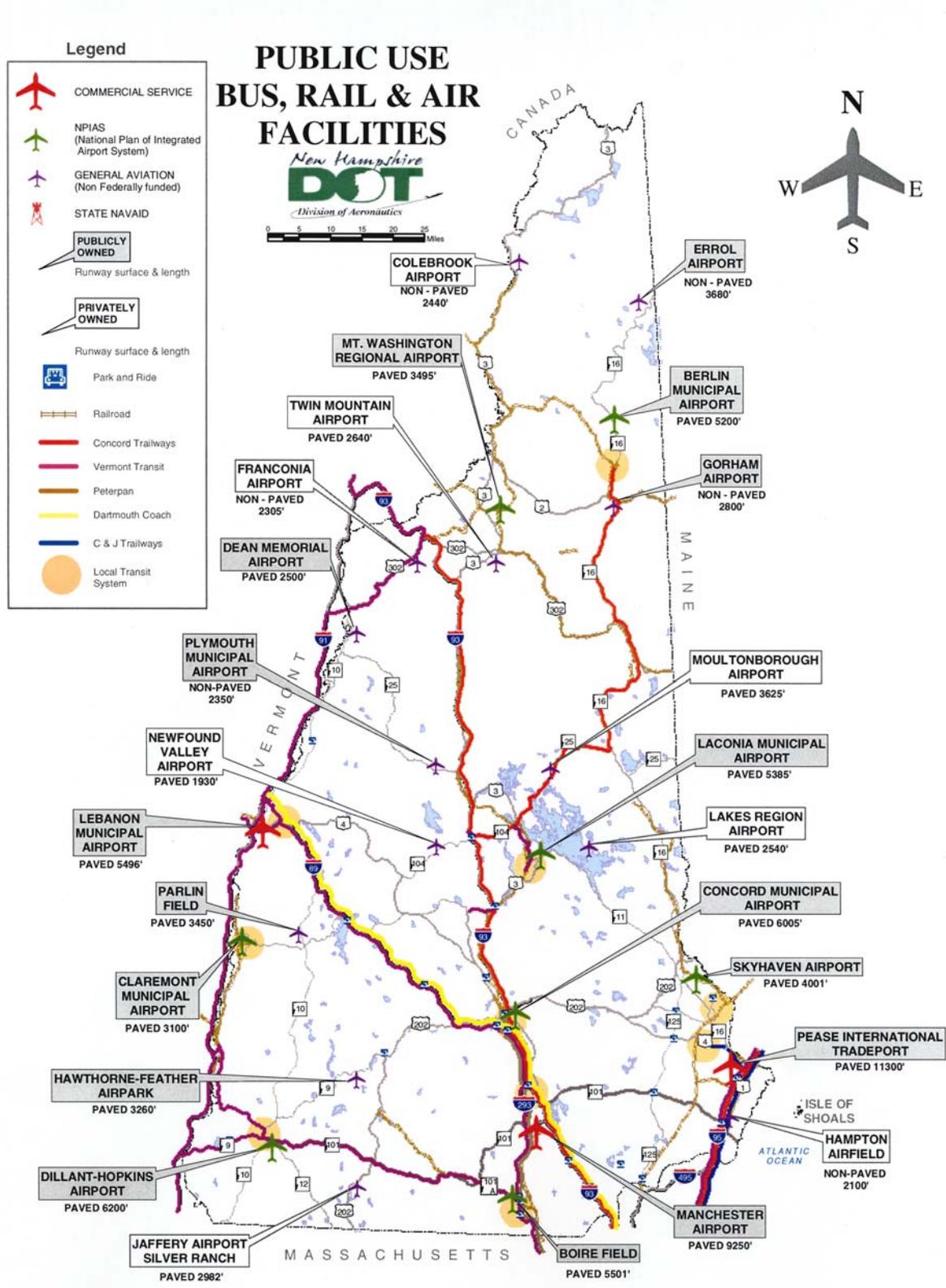
<b>Table 6-1 - US Energy Intensity by Mode: 1999</b>	
<b>Mode</b>	<b>BTUs per Passenger Mile</b>
Intercity Bus	1,128
Motorcycles	2,079
Transit: Commuter Rail	2,932
Intercity Rail	3,063
Transit: Rail	3,168
Automobile	3,635
Airline: Commercial	4,116
Personal Truck	4,511
Transit: Bus	4,802
Transit: Overall	3,853

Source: Transportation Energy Data Book (Edition 21), September 2001

Public transportation falls into two broad categories: common carriers and for-hire vehicles. Common carriers are buses, light-rail (e.g., the MBTA in Boston), trains (e.g., Amtrak), trolleys, vans, etc., while (private) for-hire modes include taxis, rental cars, shuttle vans, and limousines. In aviation by comparison, scheduled airlines serve as common carriers, while charter/air taxi and Part 135 charter operators provide for-hire aircraft.

In general, urban transit systems (light rail and buses) are owned and operated by government agencies, or are operated by non-profit organizations that rely on subsidies from government agencies. On the other hand, intercity and interstate bus companies are primarily private, for-profit companies. Amtrak provides intercity passenger rail, which is an independent agency that relies heavily on federal subsidies for its capital improvement program and operating income. By comparison, passenger and cargo airlines are exclusively privately owned and operated, for-profit companies.

Figure 6-1 – Public Transit in New Hampshire



All interstate transportation services (both ground and air) have been deregulated by the federal government, and receive varying amounts of subsidies from Washington, D.C. As a result of deregulation, private for-profit transportation companies (which include bus companies and airlines) structure their services (routes, schedules, equipment type, and fares) based on anticipated demand and revenue potential. As a result, a key factor considered by bus companies and airlines when deciding whether to serve new destinations, such as airports, is the ability to generate sufficient revenue to cover their additional expenses (so-called residual expenses). It is interesting to note that a number of bus routes in New Hampshire presently run adjacent to airports, for example:

- Dartmouth Coach along I-89 adjacent to Lebanon Airport.
- Concord Trailways adjacent to Concord and Manchester Airports along I-93.
- The Coach Company and Concord Trailways adjacent to Pease International Tradeport (I-95).
- Vermont Transit adjacent to Dillant-Hopkins Airport on Routes 9 and 12

However, the bus companies stated that they do not serve those airports because they cannot generate sufficient ridership to cover their residual costs and also the potential decrease in ridership due to longer trip times if they stop at airports.

#### *Intercity Bus Service*

Six private bus companies (Concord Trailways, Vermont Transit, C&J Trailways, Peter Pan, Coach Company, and Dartmouth Coach) provide the majority of intercity public transportation in New Hampshire (see Figure 6-1). The bus networks are primarily hub-and-spoke oriented, meaning that the bulk of service is to and from the primary hub in Boston, with smaller hubs in cities such as Manchester, Concord, Nashua, Portsmouth, Laconia, and Hanover. Only one airport in the state is served by an intercity bus carrier, Manchester Airport by Vermont Transit. As noted above, the lack of service to other airports in the state by bus carriers, even though some of their routes lie very close to airports, is a strong indication that there is insufficient demand to support bus service to other airports.

#### *Intercity Rail Service*

There are two scheduled rail services in the state, both operated by Amtrak. The first is the Vermonter that runs from Washington, D.C. to Montreal, Canada, and runs along the Vermont - New Hampshire border. The train has two stops in New Hampshire, Lebanon and Claremont. However the airports in Lebanon and Claremont do not have connections with the rail stops, and there are no plans to provide connections.

The second rail service that was recently initiated by Amtrak is known as the Downeaster. The service operates within a 114-mile corridor between Boston and Portland, ME and includes stops in Exeter, Durham, and Dover, NH. The train runs four trips daily between Boston and Portland, 365 days a year. A one-way trip takes two hours 45 minutes. Through Spring 2002, ridership has exceeded projections, and the level of rail service is projected to increase with consideration being given to extending the service north of Portland. However, no airports in NH are connected to the train service, and there are no plans to connect any NH airports along the seacoast with the rail service.

There are plans to extend MBTA commuter rail service from Boston to Nashua, and eventually to Manchester along the west side of the Merrimack River. A possible shuttle bus connection from a future train station in Bedford or Manchester to Manchester Airport may be considered, although no connection is anticipated to Boire Field, Nashua Airport. Manchester Airport has expressed a strong desire to see a connection with the rail service if the line is extended to Manchester. Discussions with FBOs and other airport operators, however, indicated that the lack of connections between their airport and rail or bus service does not appear to

have impacted their airport's level of service.

### *Public Transit*

As noted in the introduction, a number of cities in New Hampshire have local transit bus systems (Manchester, Nashua, Concord, Laconia, Keene, Portsmouth, Lebanon, Berlin) as shown in Figure 6-1, and each of these cities also have airports. However, except for Manchester, Pease International Tradeport, and Skyhaven, the local transit system does not serve the airport due to low ridership potential, even though the systems are government subsidized. Discussions with FBOs indicated that the lack of transit service to the airport has not had a significant impact on any airport's role or service level.

## **6.3 REGIONAL GROUND TRANSPORTATION SERVICES**

This section summarizes the various transportation infrastructure and services within each of the economic regions and how each links with each region's airports. The various transportation modes that serve the regions were identified and include major roadway access, rail and bus service.

### **6.3.1 NORTH COUNTRY REGION**

There are nine general aviation airports in this region (Berlin, Colebrook, Errol, Franconia, Gorham, Dean Memorial, Mt. Washington Regional, Plymouth, and Twin Mountain), and not one airport has service by a scheduled common carrier (bus, rail, or transit). All of the airports are located on public roads, and highway access to the region includes Interstate 93, US Route 3, and State Route 16, which are major north-south thoroughfares within the Region. East-west access is afforded by US Routes 2, and 302, and State Routes 26, 110, 112.

Concord Trailways provides intercity bus service from Berlin, Conway, Littleton, Franconia, Lincoln, and Plymouth, to Concord and Manchester, NH, and Boston, MA, including Logan Airport. The cities of Berlin and Gorham are served by a public transit system, the Tri-County CAP Freedom Express, however, none of the airports in the area are served by this transit system, or by Concord Trailways which also serves the region.

Although none of the airports in the North Country have dedicated public transportation service, prior arrangements can be made with the airports that have airport managers (such as Berlin and Mt. Washington Regional) for ground transportation. For example, rental cars from a local automobile dealership may be provided at Mt. Washington Regional Airport, but prior notification is required. There is also a privately owned taxi service in Whitefield that also requires either prior notification or can provide on-demand services depending upon time of day. There are no taxis or rental cars available at any of the other airports in the region, which significantly decreases the utility of the airport by transient pilots and their passengers.

### **6.3.2 UPPER VALLEY REGION**

Two major roadways, Interstate 89 and US Route 4, connect the Upper Valley region to the state capital in Concord. There are three airports in this region: Lebanon Airport is the region's only commercial service airport, and is situated adjacent to Interstate 89 and close to I-91 in Vermont; Claremont Airport and Parlin Field (Newport) are general aviation airports in the southern portion of the region, and are accessed by via State Route 10. There are rental cars and taxis available at Lebanon Airport, but no scheduled public transportation. Lebanon Airport's close proximity to two interstate highways exacerbates the impact of competition from other commercial service airports, including Manchester, Bradley Field CT, Burlington VT, and even Boston Logan (particularly for international passengers).

Dartmouth Coach provides intercity bus service from Hanover to Lebanon and New London, to Boston, MA, including Logan International Airport. Vermont Transit also serves the city of Lebanon with a similar bus service to Boston, along with a stop at Manchester Airport. Additionally, the city of Lebanon is served by Advance Transit, a local public transit company. However, none of the bus companies serve Lebanon Airport.

Lebanon and Claremont are also served by Amtrak's Vermonter, which runs from Washington D.C. to Montreal, Canada. This service has two stops in New Hampshire, Lebanon (via White River Junction), and Claremont, however, there are no connections between the rail service and any of the airports in the region.

### **6.3.3 LAKES REGION**

I-93, State Route 28, State Route 106, and US Route 3 traverse the Lakes Region north-south, connecting the region with the White Mountain and Merrimack Valley regions. State Route 11 crosses the central section of the region from east to west. Concord Trailways, an intercity bus company, serves the Lakes Region towns of Laconia, Tilton, and Meredith, NH with service to Concord, Manchester, and Boston, MA.

Laconia has a public transit system (Greater Laconia Transit Agency – GLTA) that services Laconia, Belmont, Tilton, Franklin, Meredith, Ashland, and Plymouth. Primary service is provided to downtown Laconia, and van service is provided to the other locations noted above. They also provide shuttle to Manchester Airport that can be accessed on-demand. The GLTA is based at Laconia Airport, although the airport is not listed on the routes they serve.

There are four general aviation airports within the region. Laconia Airport is the busiest and has two Fixed Based Operators, and is also served by taxis and rental cars, while the other three airports in the region, Newfound Valley, Lakes Region, and Moultonboro Airports, are privately owned and have no public transportation services (taxis, rental cars, buses, etc.) available.

### **6.3.4 STRAFFORD REGION**

The Strafford Region's major north-south access is Route 16 that leads to the Lakes Region and the eastern side of the North County Region. There are several state routes, including 202A, 125 and 11 providing east-west access.

A portion of the COAST (Cooperative Alliance for Seacoast Transportation) public transit system, located in Portsmouth, serves the region. Bus service is provided to Rochester and Farmington. Another smaller transit service, Wildcat Transit, run by the University of New Hampshire, provides students with access to the University, Dover, Durham and Newmarket. There is no intercity bus line serving the Strafford Region.

The only airport in this region is Skyhaven Airport, which is owned by the State of NH. COAST provides a stop at the airport as per their published schedule, however, information obtained from COAST indicated that there is little activity associated with this stop. Taxi service is available at Skyhaven Airport, but on an on-call basis.

### **6.3.5 ROCKINGHAM REGION**

State Route 16 traverses the region in a north-south direction and connects with the White Mountain region. US Route 1 and Interstate 95 connect the region with neighboring Massachusetts and Maine. East-west access to the region is through State Routes 101 and 107 and US Route 4.

Several intercity bus lines serve the region. The Portsmouth Transportation Center, a large intermodal center (bus station and park-and-ride lot) was built several years ago adjacent to Pease International Tradeport. The bus station is run by C&J Trailways bus line, which provides service to points west and south, including Boston and Logan Airport. Additional bus service in the region is provided by the Coach Company from the “park-and-rides” in Epping and Hampton to Boston. Concord Trailways and Vermont Transit pass through the region linking Portland, Maine and Boston, but do not stop in the region.

Local public transit is provided by COAST. COAST runs several local bus lines in the Portsmouth, Dover, Berwick (ME), and Rochester areas, with runs to Farmington, and Exeter. COAST also operates a 'trolley' that circulates on a year-round basis between the terminal and other locations at Pease International Tradeport, downtown Portsmouth, and the Portsmouth Transportation Center (C&J Trailways Terminal).

As noted above, new rail service linking Boston and Portland, Maine began operations in the region. The Downeaster rail service has three stops in New Hampshire: Exeter, Durham, and Dover and has four daily trips. The service has been successful and is expected to grow over the next few years.

Two airports are located in this region, Pease International Tradeport and Hampton Airfield. Pease International Tradeport is one of three commercial service airports in the State. There is public transportation to the airport via the trolley service provided by COAST, which links the airport terminal with the Portsmouth Transportation Center and the City of Portsmouth. There is no direct link from the airport to the Downeaster rail service, however. The terminal building can be accessed by the trolley via C&J's transportation center.

Hampton Airfield, a small but busy GA airport in North Hampton, has access to local taxi service, but no rental cars, buses, or other public transportation links at this time.

### 6.3.6 SOUTH REGION

Manchester Airport, which is the only airport in the region, has by far the most service by public transportation companies of any airport in New Hampshire. The Manchester Transit Authority (MTA) currently serves Manchester Airport, with one bus route stopping at the airline terminal building. General aviation pilots and passengers must use the fixed base operator (Wiggins Airways), that is located on the east side of Manchester Airport, on the other side of Runway 17-35 from the airline terminal. Wiggins provides shuttle van service between their facility and the airline terminal for pilots and passengers who need to travel from one area to the other. There is no public transportation service to Wiggins, although the FBO is served by taxi companies and they can arrange to have rental cars waiting for inbound GA pilots and passengers at their facility.

Manchester Airport has numerous taxi, limousine, and van services available at the airline terminal, as well as numerous rental car agencies. The only intercity bus service that stops at Manchester Airport is Vermont Transit, which has two daily stops at the airport. The remaining intercity bus lines (such as Concord Trailways, Dartmouth Coach, Peter Pan, etc.) do not stop at Manchester Airport, as their primary service is focused on Boston.

The South Region is accessed primarily by Interstate 93 and US Route 3 (Everett Turnpike) for those people traveling in a north-south direction, and by State Routes 101 and 9 for those traveling east-west. The Everett Turnpike, unlike I-93, is a toll road. New Hampshire DOT is actively exploring widening I-93 to ease the congestion on the highway between the Massachusetts border and the City of Manchester.

Manchester Airport is served primarily by Brown Avenue, which is accessed from I-293. Brown Avenue is a

local arterial with residential and commercial development, and is heavily congested, particularly during peak morning and afternoon periods. The City of Manchester is currently working to widen Brown Avenue to two lanes in each direction, and has acquired a number of homes along the road as part of the widening program. The New Hampshire DOT has completed the planning for a new airport access road/bridge to be constructed from the F.E. Everett Turnpike across the Merrimack River to the airport terminal building. The proposed schedule anticipates the road being completed by 2006.

The City of Manchester is served by a number of intercity bus lines that include Concord Trailways, The Coach Company, Dartmouth Coach, and Vermont Transit, all of which provide service to Boston and Logan Airport. Both Concord Trailways and Vermont Transit stop at the Manchester Transportation Center located downtown, while the other lines run through the region or stop at designated “park-and-ride” facilities. Peter Pan bus line runs through the region as well, and provides service to Worcester, MA.

The City of Manchester is also served by the Manchester Transit Authority (MTA) and provides public transit along thirteen routes in the city. Additionally, Flightline, a small van service, provides service to both Manchester Airport and Boston Logan Airport with several intermediate stops in Nashua, Londonderry and Salem.

The region, however, is not currently serviced by passenger rail. Consideration has been given to extending the Massachusetts Bay Transportation Authority’s (MBTA) commuter rail service to the City of Manchester sometime in the future as part of the proposed new rail service between Nashua and Boston. A study is planned to begin in 2002 to assess the option of extending the rail line and service to the City of Manchester. Initially, there may be three additional stops on the proposed rail line north of Nashua, including Merrimack and Bedford.

The Bedford train stop may be located adjacent to the proposed access road connecting the Everett Turnpike and Route 3 to Manchester Airport. Discussions with the NHDOT Bureau of Rail and Transit indicated that there could be bus or shuttle service between the train station and Manchester Airport, if a rail stop were constructed near the airport. Although there are no plans to provide commuter rail service directly to the airport if the line is extended to the City of Manchester in the future, Manchester Airport has expressed a strong interest in seeing a connection made between the airport and rail station.

### **6.3.7 SOUTHWEST REGION**

Within this region, State Routes 101, 10, 12, and 9 converge in the City of Keene, NH, which is a central location within the region. Intercity bus service is provided by Vermont Transit, which has a stop in the City of Keene.

There are three airports in the region; Dillant-Hopkins Airport, Hawthorne, and Silver Ranch Airport. Dillant Hopkins Airport has both taxi and rental car services, and both can be accessed from the airport either through calls made from the airport, or scheduled by prior arrangement. There is taxi service available at Silver Ranch Airport, however, there are no taxis, buses, or rental cars available at Hawthorne.

There is one local public transit system in the region, the HCS Community Care/City Express transit system which serves downtown Keene, however, it does not serve Dillant-Hopkins Airport.

There is no direct rail service in the region, however, Amtrak’s Vermonter does travel along the western border of the region and is accessed via the station in Brattleboro, VT. However, there is no public transportation between any of the airports in the region and the rail station in Brattleboro.

### 6.3.8 NASHUA REGION

The Nashua Region's major north-south highways are the F.E. Everett Turnpike and State Route 3, which parallels the turnpike. The major east-west routes are comprised of State Routes 101A, 111, 130 and 102. Boire Field, which is located near Route 101 and the Everett Turnpike, has taxi service available, and rental cars by prior arrangement with an FBO, but no scheduled public transportation service.

The region is served by the Nashua Transit System's Citybus. Citybus has a number of fixed routes in and around the City of Nashua, but does not have a stop at or near the airport. There are no intercity lines that serve the City, but just pass through on the F.E. Everett highway. Flightline, a small van service, does provide service to both Manchester Airport and Boston Logan Airport from several park-and-ride lots in the region.

Rail service is expected to begin sometime in 2002 with the extension of the MBTA's commuter rail service to and from Boston, MA. A new rail terminal is to be built in the southern portion of the City of Nashua, however, there are no plans to connect the airport or to provide public transportation between the train station and the airport. A feasibility study of the rail service is planned to begin in 2002 to assess the viability of extending the rail line to the city of Manchester, which could include three additional stops in Merrimack, Bedford, and Manchester.

### 6.3.9 CENTRAL REGION

The primary north-south roadway in this region is Interstate 93. Major east-west routes include Interstate 89 and State Routes 202 and 4. Like others, this region also has only one airport, Concord Airport. Hertz recently established a rental car facility in the FBO terminal building at Concord Airport in conjunction with Concord Aviation. There are taxi companies located in the city, and both taxis and car rentals are available by prior arrangement at the airport. However, the city's transit service, Concord Area Transit, does not provide bus service to or from the airport, although it runs close to the airport along Loudon Road.

A new park-and-ride lot and bus station was recently constructed adjacent to I-93. Concord Trailways and Vermont Transit provide intercity bus service, and Dartmouth Coach transits through the region via Interstate 89 and 93. However, none of the intercity bus lines serve Concord Airport, and there is no scheduled public transportation between the airport and the bus station.

## 6.4 INTERMODAL INITIATIVES

The New Hampshire Department of Transportation developed a long-range, statewide transportation plan in January 1995 that presented a number of intermodal transportation goals.

Seven goals were presented in the Plan, with specific initiatives under each goal, as shown below:

1. Maintain, enhance and manage the existing transportation network.
2. Foster an interactive and cooperative approach to integrating land use and transportation planning issues.
3. Improve the safety of the traveling public.
4. Increase the availability of transportation options and connectivity.
5. Maintain the environmental quality of New Hampshire through the development of an intermodal transportation system.
6. Promote the judicious use of financial resources to enhance the intermodal transportation system.
7. Establish a public education program.

The effectiveness of this plan is reliant upon the cooperation between the State and the regional planning commissions to effectively integrate planning to enhance the intermodal development within each of the regions.

Some of the improvements that have been made as part of the initiatives described above include the development of additional “park-and-ride” lots in the State and the intermodal bus station adjacent to Pease International Tradeport, among others. Therefore, the goals of the long-range transportation plan are being realized in the State.

## 6.5 TRANSPORTATION ISSUES FACING AIRPORTS

There are several issues that must be addressed regarding public transportation to and from airports in New Hampshire. The lack of public transportation has a number of consequences:

- It decreases utilization of airports, primarily by transient pilots and passengers, because they cannot access their ultimate destination after they’ve arrived at the airport.
- The only means of ground access is via automobile, which adversely impacts road capacity and air quality.

The following facts clearly illustrate the existing situation at airports:

- Only one airport in the state has interstate/intercity bus service (Manchester). Intercity bus lines run in very close proximity to, but do not stop at, Lebanon, Pease International Tradeport, Concord, Dillant-Hopkins, and Laconia Airports.
- Only three airports have local transit bus service (Manchester, Pease International Tradeport, and Skyhaven Airport). The GLTA is based at Laconia Airport, but does not list the airport on its route network. The cities of Concord, Keene, Berlin, Lebanon, and Nashua all have transit systems and airports, but the transit network does not serve the airports.
- Five airports in the state (Colebrook, Errol, Franconia, Newfound Valley, and Dean Memorial) have no taxis, rental cars, or buses available to provide ground transportation. In addition, none of those airports have an FBO on the field.

A number of conclusions can be drawn from this situation:

- The large majority of all ground trips to airports in NH are via automobile (private cars, taxis, and limos), which is very consistent with travel patterns/modal choices statewide.
- There is insufficient demand to support public transportation to most of the airports in the state, either by intercity bus service provided by private companies, or by local transit service provided by municipalities.

In addition, although intercity passenger rail service exists in New Hampshire (Amtrak’s Downeaster and the Vermont service), and options for providing new rail service to Nashua and Manchester are being actively explored, there are no plans to directly connect airports in New Hampshire to either existing or future rail lines.

The primary issue regarding GA airports is that they do not generate a sufficient number of passengers to support scheduled public transportation services. For example, a number of airports in cities that have public transit systems (Concord, Dillant-Hopkins, Boire Field, Berlin, Lebanon, etc.) are not served by the system’s bus route. The reason for this is that the airport does not generate sufficient ridership to include the airport on their route system.

For example, Concord Airport generates an estimated 63,000 pilot and passenger enplanements per year (based on an industry average of 2.5 pilots and passengers per GA aircraft departure). Based on the statewide trend of 82% of all commuter trips conducted by private automobile with a sole occupant, and only 1% of all commuter trips conducted by public transportation, Concord Airport could generate between 630 – 1,200 passengers per year for public transportation service. Spread over a year, that would represent an average of

between two to four passenger enplanements per day for a bus service.

Further, there are issues relating to relatively low frequency of scheduled service from small transit operations that limits the level of service that can be offered. Thus, airports like Dillant-Hopkins, Boire Field, or Berlin are not typically serviced by the local bus service as they are either located on the outer perimeter of the bus network, or are located in adjacent towns. These airports could derive a benefit if they were located in their region’s public transit system and would serve as an advantage for those passengers arriving by air to access the respective cities. However, economic factors will drive the potential service, and given that ridership would be low, the public transit systems must focus their limited resources on routes that serve the greater public.

Another issue facing both the GA and commercial service airports is intercity bus service. All of the intercity bus service provided in the State is by for-profit companies. Discussions with the Bureau of Rail and Transit indicate that for-profit companies will only serve routes or locations based upon ridership and revenue potential. As a result, it is unlikely that intercity bus service would be provided at any of the general aviation airports.

Based on the relatively low revenue potential, intercity bus service could only be provided to the airports in the state, other than Manchester, if the service were subsidized by a government agency, as is presently done with a number of local transit systems, and also with Amtrak by the federal government. Subsidies, however, are very costly on a per-passenger basis (see Table 6-2) and will not address the underlying issue of relatively small market potential for the service. As a result, it is unlikely that future bus service at most of the airports could ever be financially self-supporting, and subsidies will be required for as long as the service continues.

**Table 6-2 - 1996 US Public Transport & Highway Costs & Subsidies (Amounts in Billions)**

<b>Factor</b>	<b>Highway</b>	<b>Urban Public Transport</b>	<b>Airline</b>
User Payments	\$661,626	\$6,965	\$58,250
Tax Subsidies	(\$1,525)	\$16,292	-
<b>Total Costs</b>	<b>\$660,101</b>	<b>\$23,257</b>	<b>\$58,250</b>
Person Miles	3,652,000	38,984	434,700
User Payments per Person Mile	\$0.181	\$0.179	\$0.134
Tax Subsidies per Person Mile	(\$0.000)	\$0.418	\$0.00
<b>Cost per Person Mile</b>	<b>\$0.181</b>	<b>\$0.597</b>	<b>\$0.134</b>

Calculated from US Department of Transportation data.

**6.6 OBSERVATIONS AND CONCLUSIONS**

In response to the three questions that were raised at the beginning of this task:

1. Is the level of service provided by any airport in the state negatively impacted by the lack of ground transportation services?

At those airports with no public ground transportation services available (Colebrook, Errol, Franconia, Newfound Valley, and Dean Memorial), yes. All of those airports are privately owned-public use, and none have FBOs located on the field. The provision of ground transportation services will likely not significantly

increase utilization of the airports, although it is hard to quantify exactly how much additional traffic could be generated by better ground transportation. Private taxi and rental car companies do not serve the area in the vicinity of any of the airports, so there appears to be insufficient demand to support any level of public transportation in those areas without some form of government subsidy. Subsidies, however, as noted above, are expensive and do not address the underlying issue of low market potential.

A number of airports have taxi and rental car services available, however, they are not located on the airport. That requires in-bound pilots to arrange ahead of their arrival to have their ground transportation waiting for them, or else to wait for the car to be delivered after they arrive at the airport. Making such arrangements is particularly difficult after normal business hours, weekends, and on holidays. In addition, a number of FBOs and airport managers have indicated that the in-town taxi and car rental companies often provide poor service, thereby discouraging potential airport customers. However, the taxi and rental car companies located off-airport also serve a local and regional market beyond the airport, and the airport typically does not generate sufficient business (i.e., passenger traffic) to support a separate office at the airport, or longer business hours just for incoming pilots. Again, without some form of government subsidies, which are not recommended, it is unlikely that additional ground transportation services will be provided at those airports.

2. If so, what role does the airport sponsor, State of NH, and/or FAA play in improving those services?

As noted above, there is a very limited role for local, state, or federal agencies in increasing ground transportation services to airports. Financial subsidies are not recommended, even at airports where there are no public transportation services available. The level of ground transportation services provided is largely market-driven and supported by the local and regional customer base, not just the airport, with the exception of Manchester Airport.

One possible option is that either NHDOT or local municipality could base one or two courtesy cars at each airport for use by transient pilots and passengers. The State and municipalities auction surplus equipment, including cars, and instead of auctioning all of the cars (such as used police cars, for example) some could be based at airports. At airports with FBOs, the FBO personnel can track who uses the cars, check driver's licenses, and oversee fuel and maintenance. At airports without FBOs, an on-line registration system could be established using the internet, but the actual use of the car by transient pilots and passengers would be on the 'honor system'. Personnel from the municipality or State would have to monitor the car for fuel and maintenance. Another issue is liability insurance, and it is not known whether the municipality or State could acquire adequate coverage.

3. Is there sufficient demand and are there opportunities to increase public transportation to airports in the state?

Both intercity bus and local transit companies, with few exceptions, cannot generate sufficient ridership at airports to justify serving them, even when the airport is very close to an existing route. Numerous other factors directly affect traffic levels at airports, other than bus service, so it does not appear likely that either scheduled intercity or local transit service will be provided to airports in the foreseeable future, particularly without government subsidies. The possible exceptions being at Lebanon and Pease International Tradeport if, through their on-going marketing efforts, they generate additional airline service and passengers at the airports, they could potentially reach traffic levels that would attract intercity and/or local transit service, as is provided at Manchester Airport presently.

*Commercial Service Airports*

Table 6-3 summarizes the public transportation services that are provided at the three commercial service

airports in the State. All three of the airports have more than one public transportation service available. Of the three, Lebanon is the only airport that does not have scheduled public transportation, while both Manchester and Pease International Tradeport have intercity bus service. At Manchester, there is direct service by Vermont Transit, and at Pease International Tradeport, the trolley system provided by COAST connects the terminal with C&J Trailways at the Transportation Center.

<b>Airport</b>	<b>Rail</b>	<b>Taxi</b>	<b>Rental Car<sup>1/</sup></b>	<b>Van/Limo/Shuttle/ Courtesy Car</b>	<b>Scheduled Bus/Trolley</b>
Pease International Tradeport	--	X	X	X	X
Manchester	--	X	X	X	X
Lebanon	--	X	X	X	--

1/ (D) Rental cars provided by automobile dealerships  
Source: Airport interviews and AOPA

Manchester Airport’s passenger counts are strong enough that additional public transit opportunities could be considered in the future planning for the facility and the region. The growth opportunities for the airport are in the form of additional intercity bus service. However, at this time, the intercity bus lines are focused on the Greater Boston Region and have not developed the market to transport passengers to and from Manchester Airport. The likelihood of such service is also in question given that the intercity bus lines are providing services along routes that are profitable today. Thus, on the surface, it would appear that servicing Manchester Airport might not be profitable.

This, however, is unknown and based on our discussions with State DOT, it would appear that the intercity bus lines do not have immediate plans to develop service to Manchester Airport. Another consideration is future commuter rail service extending to Manchester. It is foreseeable that, if a rail station were developed in the Bedford area and shuttle service provided to the airport, some passengers would use the commuter rail as an alternate transportation mode. Further studies are expected to be completed for the extension of the commuter rail line, and the Division of Aeronautics and Manchester Airport should be involved in the study to provide input regarding public access to Manchester Airport

*General Aviation Airports*

Table 6-4 provides a chart indicating the public transportation services provided at the GA airports in the State.

In this table, there are only four airports that do not have any public transportation services, all of which are privately owned-public use. Of the remaining airports, eleven do not have taxi service, which is not provided in those towns. Only one airport (Skyhaven in Rochester) has scheduled public transportation service.

**Table 6-4 – Public Transportation Access – General Aviation Airports**

Airport	Taxi	Rental Car <sup>1/</sup>	Van/Limo/Shuttle/ Courtesy Car	Public Transportation
Concord	X	X	--	--
Newfound Valley	--	--	X	--
Laconia	X	X	--	--
Lakes Region	--	X (D)	--	--
Moultonboro	--	X (D)	--	--
Boire Field	X	X	X	--
Berlin	X	X (D)	--	--
Colebrook	--	--	--	--
Errol	--	--	--	--
Franconia	--	--	--	--
Gorham	--	X (D)	--	--
Dean Memorial	--	--	--	--
Mt. Washington Regional	X	X (D)	--	--
Plymouth	X	X (D)	--	--
Twin Mountain	X	X (D)	--	--
Hampton Airfield	X	X	--	--
Hawthorne	--	X (D)	--	--
Silver Ranch	X	X (D)	--	--
Dillant-Hopkins	X	X	--	--
Skyhaven	X	X	--	X
Claremont	--	X (D)	--	--
Parlin Field	--	X (D)	--	--

1/ (D) Rental cars provided by automobile dealerships off-airport  
Sources: Airport interviews, and AOPA's Airports Directory, 2001